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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/677,347	10/02/2000	Dieter Weidhaus	WEIDHAUS ET AL I	3543

7590 07/13/2005

COLLARD & ROE, P.C.  
1077 Northern Boulevard  
Roslyn, NY 11576

EXAMINER
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DOROSHENK, ALEXA A

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/677,347

Applicant(s)

WEIDHAUS ET AL.

Examiner

Alexa A. Doroshenk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 10 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/26/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Lord et al. (5,810,934).

With respect to claims 1 and 3, Lord et al. discloses a reactor comprising:

a pressure supporting enclosure (110);

an inner reactor tube (111) within the enclosure (110) , made of material which exhibits high transmission for thermal radiation (col. 2, lines 18-22);

an inlet (123) at the top of the enclosure (110);

an inlet (125) of tubular form (see figure 2) which injects a silicon bearing gas (col. 35, line 64- col. 36, line 3) and dividing the reactor into a heating zone (118) where heat is increased by quartz walls (111) (col. 27, line 66- col. 28, line 3) and above that a reaction zone (120);

a gas-distribution device (112, 115, 143) at the bottom of the enclosure (see figure 6);

an outlet (124) at the top of the enclosure (110);

an outlet (114) at the bottom of the enclosure (110);

a heater device (129) with an energy supply (col. 44, lines 20-24); and

wherein the heater device (129) is a radiation source for thermal radiation arranged cylindrically outside of the inner reactor tube (111) without being in direct contact with the inner tube (111) (see figure 2) and designed such that is used thermal radiation to heat the silicon to a reaction temperature (col. 27, line 51- col. 28, line 12).

With respect to claim 2, Lord et al. further discloses wherein a space between the inner tube (111) and the enclosure (11) is provided with insulation (16).

With respect to claims 4 and 5, Lord et al. discloses wherein the heater can emit radiation with a variety of wavelengths (col. 2, lines 11-17) meeting the wavelengths of 0.4  $\mu\text{m}$  to 900 or 300  $\mu\text{m}$ .

With respect to claim 6, Lord et al. discloses wherein the materials of construction include silicon carbide (col. 2, lines 18-22).

With respect to claim 8, Lord et al. discloses wherein the reactor is made of inert material or a component coated with an inert material (col. 2, lines 18-2 and col. 34, lines 18-24).

### ***Allowable Subject Matter***

3. Claim 7 is allowed.

### ***Response to Arguments***

4. Applicant argues that Lord's zone 122, which examiner indicated in the rejection as a reaction zone, is not a reaction zone since no reaction is taking place.

The examiner agrees and upon further consideration of the reference has now indicated zone 120 as the upper reaction zone. While both zones 118 and 120 have reactions as well as heating taking place, the instant claims use the open transitional

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language "comprising" which does not preclude the reference from having more elements than those of the instant claims. Additionally, Lord et al. does disclose two distinct zones divided at the point of inlet 125 (see figure 2) and therefore Lord et al. continues to read on the instant claims.

**Conclusion**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexa A. Doroshenk whose telephone number is 571-272-1446. The examiner can normally be reached on Monday - Thursday from 9:00 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alexa A. Doroshenk  
Examiner  
Art Unit 1764

July 7, 2005

  
ALEXA DOROSHENK  
PRIMARY EXAMINER